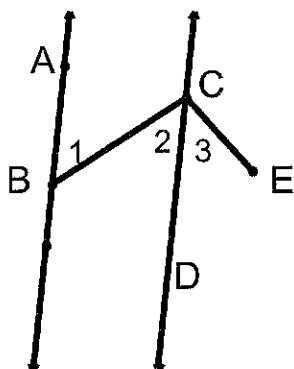


Name _____

Date _____

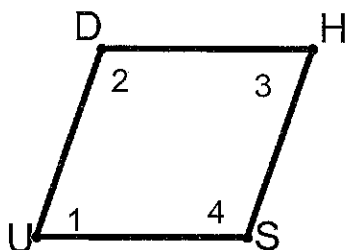
201 Parallel Line Proofs—worksheet 1

1. Given: $\overline{AB} \parallel \overline{CD}$
 \overline{CD} bisects $\angle BCE$
 Prove: $\angle 1 \cong \angle 3$



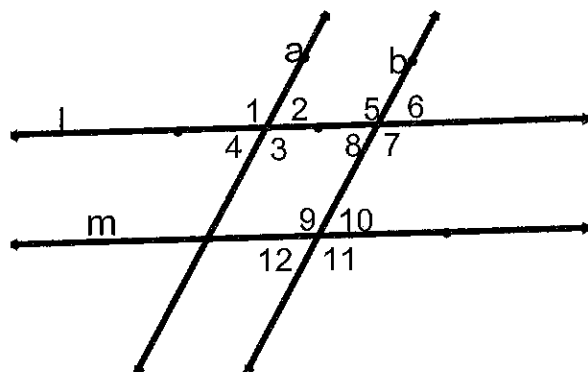
Statements	Reasons

2. Given: $\overline{UD} \parallel \overline{HS}$
 $\overline{DH} \parallel \overline{US}$
 Prove: $\angle 1 \cong \angle 3$



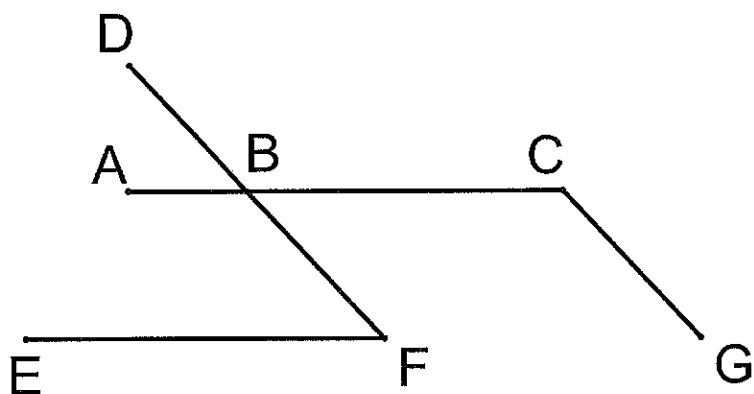
Statements	Reasons

3. Given: $a \parallel b$; $l \parallel m$
 Prove: $\angle 2 \cong \angle 12$



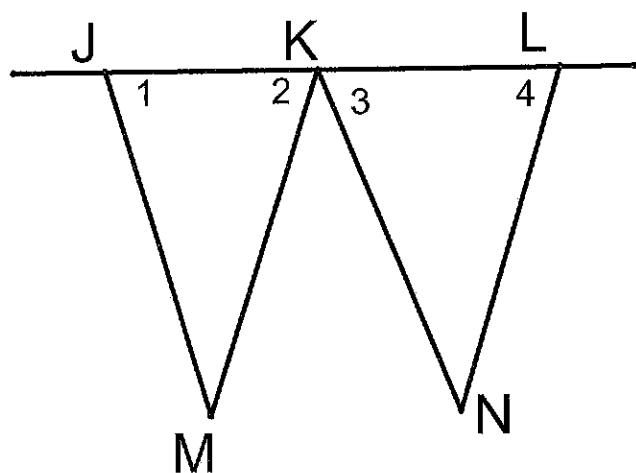
Statements	Reasons

- Given: $\overline{FD} \parallel \overline{CG}$; $\angle F$ and $\angle C$ are supplementary
 4. Prove: $\overline{CA} \parallel \overline{FE}$



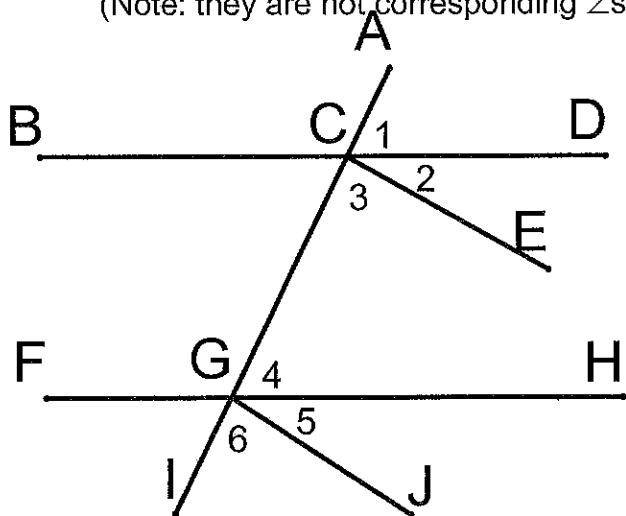
Statement	Reasons

5. Given: $\overline{JM} \parallel \overline{KN}$; $\angle 1 \cong \angle 2$; $\angle 3 \cong \angle 4$
 Prove: $\overline{KM} \parallel \overline{LN}$



Statements	Reasons

6. Given: $\overline{BD} \parallel \overline{FH}$ and $\overline{CE} \parallel \overline{GJ}$
 Prove: $\angle 2 \cong \angle 5$
 (Note: they are not corresponding \angle s)



Statements	Reasons

NAME _____

DATE _____

PERIOD _____

3-2

Practice

Angles and Parallel Lines

In the figure, $m\angle 2 = 92$ and $m\angle 12 = 74$. Find the measure of each angle.

1. $\angle 10$

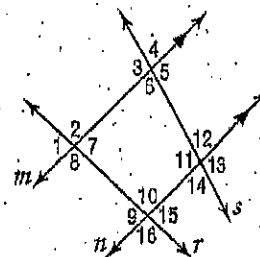
2. $\angle 8$

3. $\angle 9$

4. $\angle 5$

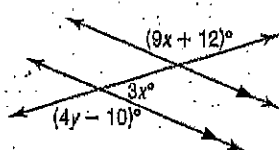
5. $\angle 11$

6. $\angle 18$

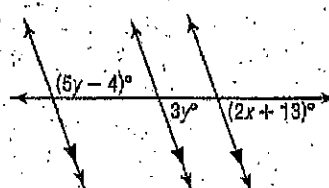


Find x and y in each figure.

7.

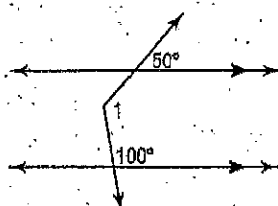


8.

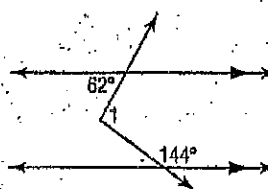


Find $m\angle 1$ in each figure.

9.



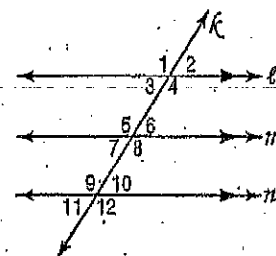
10.



~~11. PROOF~~ Write a paragraph proof of Theorem 3.3.

Given: $\ell \parallel m, m \parallel n$

Prove: $\angle 1 \cong \angle 12$



~~12. FENCING~~ A diagonal brace strengthens the wire fence and prevents it from sagging. The brace makes a 50° angle with the wire as shown. Find y .

